

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007897**Date Inspected:** 21-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Steve Barnett**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Hinge-K Components**Summary of Items Observed:**

Summary of Items Observed: On this date, Caltrans Quality Assurance Inspector (QA) Clete Henke was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR for observation of fabrication of the Hinge K Pipe Beams and related activities including in process welding and OIW Quality Control (QC) visual and nondestructive testing. The following observations were recorded:

OIW Fabrication Shop-Bay 3**Hinge-K Pipe Beam Fuse Assembly 120A-8:**

a124-8 to a124-16

The QA Inspector noted upon arrival that continuous preheat was being applied to WM3-18 circumferential Complete Joint Penetration (CJP) joint joining a124-16 and a124-8 fuse sections. OIW welder Bui Liem (WID B10) was subsequently observed performing Flux Cored Arc Welding (FCAW) at "intertack" locations between primary tack welds at the joint referenced above. Mr. Liem performed FCAW in the vertical (3G) position in accordance with approved Welding Procedure Specification (WPS) 3050. Welding parameters were observed to be in general compliance with the referenced WPS (25.1 volts & 220 amperes). Welder B10 subsequently set-up for Submerged Arc Welding (SAW) at the Inside Diameter (ID) portion of WM3-18 and initiated production welding shortly thereafter. The QA Inspector intermittently observed in-progress Submerged Arc Welding (SAW) at Inside Diameter (ID) portion of circumferential weld identified as WM3-18 on approved shop drawings as noted above. OIW welder B10 deposited SAW root and fill and passes in the flat (1G) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing two torches. The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed the in process welding

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parameters and determined that the SAW parameters and minimum preheat/interpass temperature appeared to be in general compliance with the contract requirements -- (35 volts, 585 amperes, 508mm/min travel speed).

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-8:

A124-16 to a124-8

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-1:

a111-1 forging to a110-4 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-4:

a111-4 forging to a110-4 base plate

The QA Inspector intermittently monitored OIW personnel as they ground weld access hole areas on completed welds. No production welding was performed during this shift.

OIW Fabrication Shop-Bay 6

Hinge-K Pipe Beam Fuse Assembly 120A-1:

a124-6 to a124-7

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-2:

a124-3 to a124-11

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-4:

a124-4 to a124-13

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-5:

a124-14 to a124-2

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-6:

A124-9 to a124-1

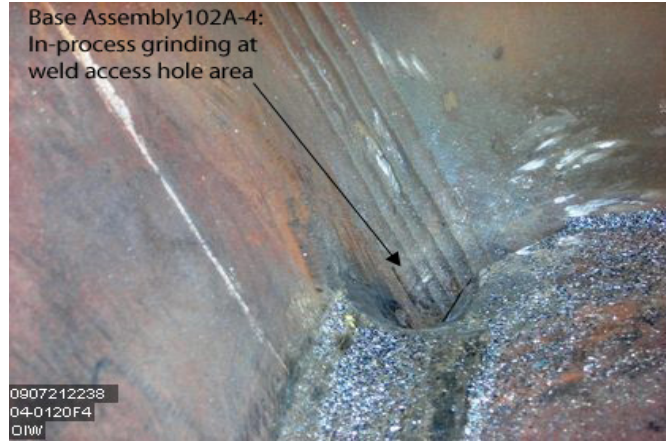
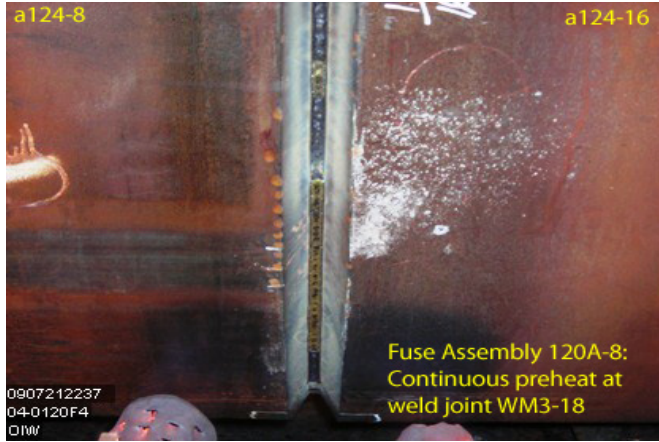
The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Material, Equipment, and Labor Tracking:

The QA Inspector performed verification of personnel involved with this project and equipment in use. The QA Inspector accounted for 3 OIW production personnel and 1 Quality Control Inspector present on this date.

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Summary of Conversations:

As noted in the body of the report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677 , who represents the Office of Structural Materials for your project.

Inspected By: Henke,Clete

Quality Assurance Inspector

Reviewed By: Adame,Joe

QA Reviewer